REMARKS

This is in response to the Office Action mailed on June 4, 2004, and the references cited therewith.

Claims 1, 6, 15 and 21 are amended, claims 2 and 3 are canceled, and claim 29 is added; as a result, claims 1 and 4-29 are now pending in this application.

§112 Rejection of the Claims

Claims 3, 6, 15, 17-21 and 28 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 3 and 17 have been amended to indicate that the modifications are performed after navigation sequences by using the phrase "future users". This term is intended to be inclusive of any user browsing the site after the modification.

The rejection of claim 18-20 is believed moot in view of the amendment to claim 17.

Claims 6 and 21 have been amended to remove the word "electronically". While such term is generally well known as involving the use of electronic based equipment such as computers, and in fact is quite clear in the context of monitoring navigation of a web site, it has been removed consistent with the Examiner's rejection. It should be further noted that the specification does indicate a tool performs the monitoring, and that such types of tools are well known in the art as software programs running on computers.

Claims 15 and 28 were rejected for omitting values stored in the matrix. This rejection is respectfully traversed. The matrix is shown and described at least on pages 7 and 8 of the application, where shown in table form. The values stored are inherent from the claimed description of what is stored. In other words, the MxN slot of a matrix will have a numerical value corresponding to the identified item. The structure of such a claimed matrix is clearly identified on pages 7 and 8, and there is no ambiguity of the claims. Further, actual values stored will be apparent from the description of the corresponding column. "separated page shift sequences" will be a sequence of page numbers. "number of counted occurrences of each of the

page sift sequences" will be a number, as will the "probability associated with each of the number of counted occurrences to predict future user patterns".

The Examiner indicates that "such matrices are usually split into three matrices and linked through a database." This statement is respectfully traversed, and the Examiner is requested to provide an affidavit or reference supporting such a statement if maintained. In addition, the application clearly describes the matrix as claimed. As such, the rejection should be withdrawn.

§102 Rejection of the Claims

Claims 1, 4-16 and 21-28 were rejected under 35 USC § 102(e) as being anticipated by Horvitz (U.S. Patent No. 6,182,133). This rejection is respectfully traversed. Applicant reserves the right to swear behind the reference at a later date.

Horvitz prefetches web pages for a particular user based on user models, which may include recent sequences of pages downloaded to the user, as stated in Col. 4, lines 2-14. Claim 1 monitors "web navigation sequences performed by each user", and analyzes "the stored web navigation sequences to predict future user patterns." Claim 1, as amended differs from language cited in Horvitz, in that it does not predict for a single user, but rather monitors multiple users to predict what future users will do, and then adds modifying the website "to enhance the effectiveness of the web site usage by future users." It does not address the same problem as Horvitz, which is concerned with prefetching pages likely to be visited, not providing information to modify the website.

Claim 1 as amended, incorporates a probability associative matrix from claim 15. It now refers to the use of a probability associative matrix that includes page shift sequences separated from the web navigation sequences. This element is not shown in the references. With respect to claim 15, the Office Action cites Col. 43, lines 9-37 of Horvitz. This language specifically refers to the use of a user model, and is used to select pages for prefetch. While sequences of page transitions are provided as inputs to the model of user behavior in Horvitz in the cited language, the actual model is referred to as "a Bayesian network, or specializations adapted for temporal transitions, such as a Hidden Markov Model," There is no discussion of the use of a

probability associative matrix as claimed. Further, claim 1 does not create a model for a user, but uses the behaviors of prior users to predict future user patterns.

Claim 1 also now references modifying the website based on the information to enhance the effectiveness of website usage by users.

Independent claim 16 also distinguishes from Horvitz in a similar same manner. In addition, it references the use of a probability associative matrix, or "PAM analyzer to analyze each of the monitored web navigation sequences to predict the web navigation sequences of future users visiting the site." The Office Action refers to Column 43, lines 9-37 as describing a PAM with respect to claim 15. While sequences of page transitions are provided as inputs to a model of user behavior in Horvitz in the cited language, the actual model is referred to as "a Bayesian network, or specializations adapted for temporal transitions, such as a Hidden Markov Model," There is no discussion of the use of the probability associative matrix as claimed.

§103 Rejection of the Claims

Claims 2, 3 and 17-20 were rejected under 35 USC § 103(a) as being unpatentable over Horvitz as applied to claims 1, 16 above, and further in view of Hansen et al. (U.S. Patent No. 6,449,604). This rejection is respectfully traversed on the basis that the combination of the references does not teach or suggest all the elements of the claims, and that the references are not properly combinable.

Hansen et al. does not provide the elements missing from the independent claims as described above. Among the differences, Hansen et al. does not provide a probability associative matrix, and does not provide probabilities associated with specific page transitions.

The references are not properly combinable, as they are directed to different problems. The Office Action indicates that "At the time the invention was made, one or ordinary skill in the art would have recognized the rich collection of data provided by Horvitz, and would have recognized the many uses and needs for higher-level summaries of usage patterns (col. 2, lines 29-31). However, Horvitz is directed toward the problem of prefetching pages that are likely to be selected for viewing by a user. Hansen et al. is directed toward providing information about a currently selected page from the page itself. Hansen et al. keeps track of the referral page, not

which pages are likely to be transitioned to. Thus, they are temporally opposite, making it highly unlikely that anyone would think to combine them.

New claim 29 includes many features of claim 1 that distinguish the references in the same manner, and in addition, includes a reference to a specific type of web site modification based on the information in the probability associative matrix. None of the references include such an element. Hansen et al. merely provides information to web site designers, and does not suggest any type of page transition sequences in such information.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By his Representatives,

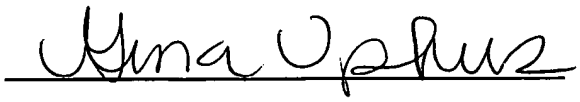
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7 day of September, 2004.

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